

Collaboration and Interoperability Support for Agile Enterprises in a Networked World: Emerging Scenarios, Research Challenges, Enabling Technologies

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Abstract. The economic success of enterprises increasingly depends on their ability to react to changes in their environment in a quick and flexible way. Examples of such environmental changes include regulatory adaptations (e.g. introduction of Sarbanes-Oxley or Basel II), market evolution, altered customer behavior, process improvement, and strategy shifts. Companies have therefore identified business agility as a competitive advantage required for coping with business trends like increasing product and service variability, faster time-to-market, and increasing division of labor along the supply chain. In particular, the agile enterprise should be able to quickly set up new business processes as well as to adapt existing ones. However, networked enterprises must not accomplish such business process changes independent from the interactions they have with their partners and customers; e.g., business contracts and business compliance rules must be ensured after business process changes as well. This keynote will discuss major research challenges to be tackled in this context. Further, it will present advanced methods, concepts and technologies enabling collaboration and interoperability support for the agile enterprise in a networked world.

Keywords: networked enterprises; collaboration; interoperability; agility; business process change, business process compliance

References

1. Reichert, M., Weber, B.: Enabling Flexibility in Process-Aware Information Systems: Challenges, Methods, Technologies, Springer, 2012
2. Reichert, M., Rinderle-Ma, S., Dadam, P.: Flexibility in Process-aware Information Systems. LNCS Transactions on Petri Nets and Other Models of Concurrency, Special Issue on Concurrency in Process-aware Information Systems, LNCS 5460, Springer, Vol. 2, pp. 115-135, 2009
3. Dadam, P., Reichert, M.: The ADEPT Project: A Decade of Research and Development for Robust and Flexible Process Support - Challenges and Achievements. Computer Science – R & D, 23(2): 81-97.
4. Knuplesch, D., Reichert, M., Mangler, J., Rinderle-Ma, S., Fdhila, W.: Towards Compliance of Cross-Organizational Processes and their Changes. Proc BPM'12 Workshops, Tallinn, Estonia, 2012, LNBIP, Springer

5. Fdhila, W., Rinderle-Ma, S., Reichert, M.: Change Propagation in Collaborative Processes Scenarios. Proc 8th IEEE Int'l Conf. on Collaborative Computing (CollaborateCom'12), Pittsburgh, US, 2012
6. Knuplesch, D., Pryss, R., Reichert, M.: Data-Aware Interaction in Distributed and Collaborative Workflows: Modeling, Semantics, Correctness. Proc 8th IEEE Int'l Conf. on Collaborative Comp (CollaborateCom'12), Pittsburgh, US, 2012
7. Rinderle, S., Wombacher, A., Reichert, M.: Evolution of Process Choreographies in DYCHOR. Proc. 14th Int'l Conf. on Coop Information Systems (CooplS'06), Montpellier, France, LNCS 4275, Springer, pp. 273-290
8. Rinderle, S., Wombacher, A., Reichert, M.: On the Controlled Evolution of Process Choreographies. Proc. 22nd Int'l Conf. on Data Engineering (ICDE'06), Atlanta, US, 2006, IEEE Comp Society Press, pp. #124.
9. Ly, L.T., Knuplesch, D., Rinderle-Ma, S., Goeser, K., Pfeifer, H., Reichert, M., Dadam, P.: SeaFlows Toolset - Compliance Verification Made Easy for Process-aware Information Systems. Proc CAiSE'10 Forum - Information Systems Evolution, Hammamet, Tunisia, 2010, LNBIP 72, Springer, pp. 76-91.
10. Mutschler, B., Reichert, M., Bumiller, J.: Unleashing the Effectiveness of Process-oriented Information Systems: Problem Analysis, Critical Success Factors and Implications. IEEE Trans on Systems, Man, and Cybernetics (Part C), 38(3):280-291, 2008